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Research Memorandum 75-13

FACTORS INFLUENCING PROMOTION TO ARMY COLONEL

Ronald G. Downey

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FACTORS INFLUENCING PROMOTION TO
ARMY COLONEL

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FACTORS INFLUENCING PROMOTION TO ARMY COLONEL

BACKGROUND

↓ This research is part of a larger effort to develop improved performance evaluation techniques for use by Army personnel management agencies in making decisions on school and duty assignments and promotions. Specifically, the study analyzed the present promotion system and the information used by the Promotion Board in making selections.

Promotion Boards are given only general guidance and recommendations for making their decisions, and are forbidden to discuss their final choices (AR 624-100). Therefore, this study attempts to discover the factors most closely related to individual promotion decisions by examining the performance records of the officers concerned.

Through identification of the procedures by which a particular board has operated, data to be presented to future boards can be put in better focus. Further, an understanding of one board's action can aid in the development of a conceptual model of the officer career system.

OBJECTIVES

↓ The study has the following objectives: To determine the relative importance of each record factor available to the Promotion Board; to develop the best combination of factors which identify the board's selections; and to determine whether promotion factors differ according to branch or branch group. In the broadest sense the study is an effort to duplicate the Promotion Board decisions, after the fact.

METHOD

SAMPLE FOR ANALYSIS

The sample chosen was all Army officers in the temporary grade of Lieutenant Colonel who were considered for promotion to Colonel for the first time in FY 1970; 1329 LTCs were considered, of which 714 were selected for promotion. The total group was divided into career branch groups according to the concepts of the Officer Personnel Management System, and then subdivided into career branches within these groups. The three groups were Combat Arms; Combat Support; and Materials, Movements and Others. Table 1 summarizes the percentage of officers selected and not selected for promotion by branch, branch group, and total.

¹ The research program was started under Francis Medland, Work Unit Leader.

Table 1
NUMBER AND PERCENTAGE OF OFFICERS IN EACH
BRANCH GROUP AND BRANCH BY PROMOTION STATUS

Branch Group	Branch	Promotion Status		Total N
		% Promoted	% Not Promoted	
Combat Arms	Air Defense Artillery (AD)	62	38	82
	Armor (AR)	55	45	129
	Field Artillery (FA)	65	35	134
	Infantry (IN)	51	49	333
	TOTAL Combat Arms	56	44	678
Combat Support	Chemical Corps (CM)	55	45	29
	Corps of Engineers (EN)	64	36	133
	Military Intelligence (MI)	48	52	58
	Military Police (MP)	69	31	29
	Signal Corps (SC)	45	55	86
	TOTAL Combat Support	56	44	335
Materials, Movements, and Others	Adjutant General's Corps (AG)	38	62	47
	Finance Corps (FI)	38	62	24
	Ordnance Corps (OD)	44	56	81
	Quartermaster Corps (QM)	49	51	70
	Transportation Corps (TC)	54	46	94
	TOTAL Materials, Movements, and Others	47	53	316
ALL Branches		54	46	1329

Note: χ^2 Tests for difference were:

Between branch group: $\chi^2 = 7.93$, $df = 2$, $p < .02$

Within branches: Combat Arms $\chi^2 = 9.35$, $df = 3$, $p < .05$
 Combat Sup. $\chi^2 = 10.73$, $df = 4$, $p < .05$
 Materials, etc. $\chi^2 = 4.56$, $df = 4$, $n.s.$

VARIABLES

All information came from the Officer Master Tape Record. An initial set of variables pertinent to the promotion process was requested, from which only information which was available for most of the sample and sufficiently updated was used. The final variables were: Military Education level, Civilian Education level, Source of Commission, Officer Efficiency Index (OEI) for 1961, Officer Annual Averages for 1962-1968 (OAA_1 - OAA_7), Year of Birth, and Promotion Board Action.

The Army has a series of education and training programs for officers. Most officers attend the first two, Basic and Advanced Training. However, selection for the senior level programs, Command and General Staff College (C&GSC) and later a Senior Service College, is increasingly competitive. Many officers who do not attend senior level schools achieve credit by completing equivalency programs. The Army also promotes continuing education through a variety of supportive programs and by considering advanced degrees in the promotion selection process.

Although no official weight is placed on the source of an officer's commission, according to folklore certain groups do receive special considerations. Therefore this study included Source of Commission as a factor to be examined.

The Officer Efficiency Report is the formal mechanism by which job performance and potential are rated. Reports are made on a periodic basis and when the ratee or rater changes job or duty station. The Officer Annual Average (OAA) is derived by averaging the efficiency reports received by an officer during a given year, weighted by the length of time each rating covers. The Officer Efficiency Index (OEI), a system of averaging OAA's for the five most recent years, was discontinued in 1961.

Year of Birth was included to investigate the effects of age on promotion. A positive relationship for Year of Birth reflects younger average age of promotion.

ANALYSIS

The first step in the analysis was to change the alphanumeric codes for Military and Civilian Education and Source of Commission into a series of numbers that combined similar codes, were logically and empirically consistent, and could be used in correlations.

Next, the full set of product moment correlations by branch was computed. Because correlations were computed only on available information,

different numbers of individuals were involved. Multiple correlations by branch, branch grouping, and total group were computed using the inter-correlation matrix rather than raw data. All 12 variables were used for the multiple correlations for branches. Based on results from the branch analyses, the last six annual averages (OAA₂-OAA₇) were dropped from the branch group multiple correlations. Therefore, the number of variables differs by branch (12) and branch group (6).

The annual averages were then combined into six composite scores as follows: First the OAA was converted into a standard score (using the total group) and then standard scores were averaged cumulatively year by year. If an individual lacked a score for a particular year, his average until that time was substituted. This procedure yielded a set of six composite OAA scores that were then correlated with promotion status.

The correlations between single variables and promotion status were compared between each branch and between each branch group. Also noted was the overall level of relation between each of the 12 variables within a branch or branch group and promotion status.

RESULTS

The promotion rates for branches and groupings, presented in Table 1, varied significantly, from a high of 69% for Military Police to a low of 38% for Adjutant General's Corps and Finance Corps.

Military Education was divided into three groups. Group one was composed of officers that had not reached the level of C&GSC; a second group had training equivalent to C&GSC; and the third group had completed C&GSC or higher. Table 2 gives the percentage of the total that were promoted or not promoted from each education group. The chi square of 391.58 (df = 2) was significant ($p < .001$), indicating a different rate of promotion for each group.

Civilian Education was also divided into three levels: Less than a college degree, undergraduate college degree, and graduate degree. Table 3 lists the percentage of the total promoted and not promoted from each level. The resultant chi square of 173.65 (df = 2) was significant ($p < .001$) and indicated different rates of promotion for different education levels.

Table 4 presents the same information according to Source of Commission, as follows: Reserve Army, Regular Army, and other. The chi square of 217.43 (df = 2) was again significant ($p < .001$). The greatest percentage of officers promoted were commissioned in the Regular Army.

Table 2

PROMOTION STATUS BY MILITARY EDUCATION
(N = 1313)^a

Education Level	Promotion Status	
	% of Total Promoted	% of Total Not Promoted
Less than C&GSC	3	21
Equivalent to C&GSC	13	15
C&GSC or Higher	38	10
TOTAL	54	46

^a Sixteen officers did not have a military education code on record.

Table 3

PROMOTION STATUS BY CIVILIAN EDUCATION
(N = 1303)^a

Education Level	Promotion Status	
	% of Total Promoted	% of Total Not Promoted
Less than a college degree	5	17
Undergraduate degree	24	20
Graduate degree	25	9
TOTAL	54	46

^a Twenty-six officers did not have a civilian education code on record.

Table 4
PROMOTION STATUS BY SOURCE OF COMMISSION
(N = 1329)

Source	Promotion Status	
	% of Total Promoted	% of Total Not Promoted
Reserve Army ^a	5	18
Regular Army ^b	48	24
Other ^c	1	4
TOTAL	54	46

^a Officers in this group received their original commissions in USAR; includes all programs (OCS, ROTC, USMA, others).

^b Officers in this group received their original commissions in the Regular Army; includes all programs (OCS, ROTC, USMA, others).

^c Officers in this group were not classifiable in either the Reserve or Regular groups.

An intercorrelation matrix of all variables was computed for each branch, while a partial set of variables, dropping OAA₂-OAA₆, was computed for branch groups and total group. Tables A1, A2, and A3 in Appendix A list the means and standard deviations of all variables for each branch by branch groups, and Table A4 lists the means and standard deviations for branch groups.

Tables 5, 6, and 7 show the correlations between the selection variables and promotion status for the branches within each branch group. Table 8 gives the same results for branch groups and total group.

For the Combat Arms branches, the pattern in Table 5 showed selection variables to have a positive, significant relationship with promotion status. The OEI had the highest value in three out of the four branches, but Military Education had only slightly smaller correlations. Most correlations for OAA's ranged in the .30's; values for the remaining variables ranged from -.10 to .61.

Table 5

CORRELATIONS BETWEEN SELECTION VARIABLES AND PROMOTION
STATUS FOR COMBAT ARMS BRANCHES

Variables	Branch			
	AD N = 82	AR N = 129	FA N = 134	IN N = 333
Military Education	.61	.55	.53	.47
OAA ₁	.32	.32	.25	.35
OAA ₂	.47	.21	.50	.34
OAA ₃	.28	.23	.41	.32
OAA ₄	.33	.39	.22	.34
OAA ₅	.30	.45	.36	.35
OAA ₆	.34	.49	.38	.33
OAA ₇	.41	.35	.42	.36
OEI	.62	.56	.49	.51
Civilian Education	.29	.47	.27	.28
Year of Birth ^a	-.10*	.33	.41	.38
Source of Commission ^b	.37	.44	.22	.33

Note. All correlations significant ($p < .05$) except as marked by asterisk.

^a Higher positive value indicates younger mean age at time of promotion.

^b Original commission in Reserve Army, Regular Army, or not classifiable in either (see Table 4).

* NOT significant at $p < .05$.

Table 6

CORRELATIONS BETWEEN SELECTION VARIABLES AND PROMOTION
STATUS FOR COMBAT SUPPORT BRANCHES

Variables	Branch				
	CM N = 29	EN N = 133	MI N = 58	MP N = 29	SC N = 86
Military Education	.52	.61	.54	.52	.61
OAA ₁	.41	.33	.39	.50	.21*
OAA ₂	.39	.32	.41	.29*	.35
OAA ₃	.28*	.46	.31	.16*	.23
OAA ₄	.24*	.41	.50	.35*	.09*
OAA ₅	.41	.48	.40	.43	.12*
OAA ₆	.49	.26	.33	.46	.18*
OAA ₇	.38	.23	.27	.34*	.21*
OEI	.33*	.52	.40	.40	.38
Civilian Education	.41	.53	.47	.24*	.29
Year of Birth ^a	.50	.34	.34	.60	.26
Source of Commission ^b	.44	.51	.23*	.57	.31

Note. All correlations significant ($p < .05$) except as marked with asterisk.

^a Higher positive value indicates younger mean age at time of promotion.

^b Original commission in Reserve Army, Regular Army, or not classifiable in either (see Table 4).

* NOT significant at $p < .05$.

Table 7

CORRELATIONS BETWEEN SELECTION VARIABLES AND PROMOTION
STATUS FOR MATERIALS, MOVEMENTS, AND OTHER BRANCHES

Variables	Branch				
	AG N = 47	FI N = 24	OD N = 81	QM N = 70	TC N = 94
Military Education	.64	.91	.56	.62	.71
OAA ₁	.46	.54	.35	.41	.30
OAA ₂	.43	.53	.38	.37	.38
OAA ₃	.50	.35*	.39	.51	.50
OAA ₄	.47	.34*	.29	.30	.46
OAA ₅	.28*	.49	.30	.18*	.52
OAA ₆	.42	.46	.42	.14*	.45
OAA ₇	.46	.60	.31	.17*	.51
OEI	.42	.60	.44	.41	.49
Civilian Education	.31	.59	.52	.22*	.29
Year of Birth ^a	.47	.50	.33	.22*	.39
Source of Commission ^b	.39	.38*	.50	.38	.50

Note. All correlations significant ($p < .05$) except as marked with asterisk.

^a Higher positive value indicates younger mean age at time of promotion.

^b Original commission in Reserve Army, Regular Army, or not classifiable in either (see Table 4).

* NOT significant at $p < .05$.

Table 8

CORRELATIONS BETWEEN SELECTION VARIABLES AND PROMOTION
STATUS FOR BRANCH GROUPS AND TOTAL GROUP

Variables	Combat Arms	Combat Support	Materials, Movements, and Other	Total
Military Education	.51	.58	.66	.55
OAA ₁	.29	.32	.38	.32
OEI	.51	.44	.45	.48
Civilian Education	.31	.44	.36	.36
Year of Birth ^a	.32	.36	.38	.35
Source of Commission ^b	.32	.42	.46	.38

Note. All correlations significant, $p < .05$.

^a Higher positive value indicates younger mean age at time of promotion.

^b Original commission in Reserve Army, Regular Army, or not classifiable in either (See Table 4).

Table 6 showed that selection variables in the Combat Support branches bore less relation to promotion than in the Combat Arms. Military Education had the highest value in four out of the five branches. There was a tendency for OEI, Civilian Education, Year of Birth, and Source of Commission relationship to vary from branch to branch with the average value in the .40 range. The OAA's had an even wider variation, ranging from nonsignificant to high values.

The pattern shown in Table 7 for the Materials, Movements, and Other branches resembled that of the Combat Support group. In this branch group, the correlation between Military Education and promotion was the highest recorded. Only half as many OAA's as in the Combat Support group had nonsignificant relationships with promotion.

Table 8 shows the correlations of a reduced set of variables (OAA₂-OAA₇ were dropped on the basis of results from branch analysis) with

promotion for the combined branch groups and the total group. These results parallel those in Tables 5-7.

The results from developing composite OAA scores are presented in Table 9. The correlation values for the composites reflect only small increases over the highest single OAA values (see Tables 5, 6, and 7). In five of the fourteen branches there was a substantial, significant increase between the first composite and the final composite. The OAA 1-7 composite correlations were about equal with OEI and Military Education.

Multiple correlation coefficients between six selection variables and promotion were produced. Table 10 presents the results for branch groups (using 6 predictors), and branch. Because of the limited sample sizes and the number of variables, corrected multiple correlations were computed. A chi square test for an overall difference in correlational values indicated marginal differences did occur.² The chi square tests within branch groups indicated the Materials, Movements, and Other groups had different levels of correlation within the group. Finally, a test of differences between groups indicated that the Materials, Movements, and Other groups had a lower group correlation. No attempt was made to determine the best (reduced) set of variables which would account for promotion.

CONCLUSIONS

Analysis of promotion factors is important in developing a formal model of the officer career progression system and in developing, testing, and implementing new evaluative procedures. It cannot be assumed that high correlations between the measured factors and promotion mean that the Promotion Board used these factors directly in making its decisions, but presumably they used either these or related variables.

Military Education level yielded the highest single relationship to promotion in most of the branches. The OEI was a close second. Both of these factors were determined 6 to 8 years before the Promotion Board action, and the OEI was used to select officers for C&GSC. It is therefore impossible to determine the degree to which one factor influenced the other in their close relationship to promotion, but their importance cannot be overlooked. The other factors, OAA's, Source of Commission, Year of Birth, and Civilian Education were related to promotion, the OEI, Military

² The chi square test is normally used with correlations rather than multiple correlations. Since no other test could be found, it was used as an approximation of the probability of difference in the multiple correlations.

Table 9

CORRELATIONS BETWEEN PROMOTION STATUS AND OAA COMPOSITES,
OEI, AND MILITARY EDUCATION FOR EACH BRANCH

Variable	Combat Arms				Combat Support				Materials, Move., & Others					
	AD	AR	FA	IN	CM	EN	MI	MP	SC	AG	FI	OD	QM	TC
OAA ₁₋₂	.55	.32	.43	.42	.32*	.36	.48	.32*	.37	.52	.63	.53	.45	.40
OAA ₁₋₃	.53	.33	.57	.45	.32*	.53	.53	.36	.36	.57	.56	.57	.58	.52
OAA ₁₋₄	.52	.39	.52	.48	.37	.55	.61	.45	.33	.61	.54	.55	.57	.59
OAA ₁₋₅	.53	.50	.55	.49	.46	.58	.61	.47	.31	.58	.57	.57	.54	.66
OAA ₁₋₆	.55	.55	.56	.51	.52	.56	.63	.55	.32	.59	.58	.61	.54	.68
OAA ₁₋₇	.60	.56	.58	.54	.53	.56	.62	.55	.33	.60	.61	.60	.52	.69
OEI ^a	.62	.56	.49	.51	.33	.52	.40	.40	.38	.42	.63	.44	.41	.49
Military Ed. ^a	.61	.55	.53	.47	.52	.61	.54	.52	.61	.64	.91	.56	.62	.71

Note. Correlations significant ($p < .05$) except as marked by asterisk.

^a Repeated from previous tables for comparison.

* NOT significant at $p < .05$

Table 10

MULTIPLE CORRELATIONS FOR BRANCH GROUPS
AND BRANCHES

Branch Group	Branch	Multiple R	Corrected R ^a
Combat Arms	Air Defense Artillery (AD)	.72	.67
	Armor (AR)	.70	.66
	Field Artillery (FA)	.64	.60
	Infantry (IN)	.61	.59
	TOTAL Combat Arms	.61	.61
Combat Support	Chemical Corps (CM)	.74	.50
	Corps of Engineers (EN)	.71	.68
	Military Intelligence (MI)	.73	.65
	Military Police (MP)	.77	.57
	Signal Corps (SC)	.68	.62
	TOTAL Combat Support	.68	.67
Materials, Movements, and Others	Adjutant General's Corps (AG)	.71	.59
	Finance Corps (FI)	.94	.88
	Ordnance Corps (OD)	.70	.64
	Quartermaster Corps (QM)	.70	.63
	Transportation Corps (TC)	.75	.71
	TOTAL Materials, Movements, and Others	.71	.70

Note. χ^2 tests were performed for differences in correlation:

Between all branches: $\chi^2 = 21.8579$, $df = 13$, $p < .10$

Between branches within groups: combat arms, $\chi^2 = 3.7735$, $df = 3$, $p < .30$, combat support, $\chi^2 = .7366$, $df = 4$, $p < .95$, materials, m., & others, $\chi^2 = 9.7426$, $df = 4$, $p < .05$.

Between branch groups, $\chi^2 = 7.9140$, $df = 2$, $p < .02$.

^a Multiple correlation corrected for bias due to number of individuals and number of variables.

Education, and each other, but OAA's had the lowest average relationships with promotion.

The OAA data were incomplete because many officers did not have the latest OAA on their record. Also, such refined data as OAA in the highest command held, OAA in the highest staff position, or OAA in combat were not available on the Master Tape System but are often used by Army personnel systems.

The pattern of correlations found in this study strongly supports the theory that the Army's selection, assignment, and promotion systems are a series of interlocking steps, with each decision predetermining the next.

The use of a composite OAA attempted to solve the problem of missing OAA information, but the relation of the composite to promotion was only slightly better than that of the single highest OAA. There was a slight tendency for OAA's to correlate most highly with those of adjacent years, indicating some slight reliability of performance over time. The tendency for OAA's to increase their means and decrease their variation (inflation) decreases their value as selection variables.

This analysis reconstructs the Promotion Board activities according to branch, branch groupings, and total group. The Promotion Board used a system of selection that was consistent within branch groups and to some extent across the total group. Many differences found between branch groups could well be attributed to differences in the overall level (primarily, Military Education and Source of Commission) achieved by the various branches within a group.

APPENDIX

Appendix	Page
Tables	
A-1. Means and standard deviations of variables for each branch in combat arms	17
A-2. Means and standard deviations of variables for each branch in combat support	18
A-3. Means and standard deviations of variables for each branch in materials, movements and others	19
A-4. Means and standard deviations of variables for branch groups	20

Table A-1

MEANS AND STANDARD DEVIATION OF VARIABLES FOR
EACH BRANCH IN COMBAT ARMS

Variables ^a	Mean				Std. Dev.			
	AD ^b	AR	FA	IN	AD	AR	FA	IN
Military Education	2.5	2.5	2.5	2.5	.65	.67	.68	.65
OAA ₁	229.5	230.4	230.3	232.3	17.3	13.5	11.6	7.0
OAA ₂	231.2	230.8	231.4	230.4	5.6	13.5	6.5	11.5
OAA ₃	228.8	230.2	229.1	229.4	7.6	7.6	10.4	7.7
OAA ₄	227.4	228.9	227.1	227.8	7.0	7.9	8.5	8.8
OAA ₅	223.2	223.7	223.4	223.6	12.4	12.3	10.2	11.7
OAA ₆	214.1	215.1	211.4	211.9	13.9	16.5	17.5	18.1
OAA ₇	203.3	206.6	204.6	205.1	20.7	21.9	20.4	18.0
OEI	125.6	126.0	123.7	126.4	11.1	10.0	9.3	10.1
Civilian Education	1.9	2.2	2.2	2.1	.64	.74	.68	.62
Year of Birth ^c	25.8	25.6	25.7	25.6	2.3	2.4	2.3	2.4
Source of Commission	2.4	2.6	2.5	2.7	.87	.76	.83	.70

^a Variables are defined in Analysis and Results sections.

^b See Table 1 for branch names.

^c Higher values indicate younger ages at time of promotion.

Table A-2
MEANS AND STANDARD DEVIATION OF VARIABLES FOR
EACH BRANCH^a IN COMBAT SUPPORT

Variables ^a	Mean					Std. Dev.				
	EN	CM	MI	MP	SC	EN	CM	MI	MP	SC
Military Education	2.0	2.0	2.0	2.0	1.9	.82	.92	.80	.89	.83
OAA ₁	232.7	234.0	230.1	232.2	230.3	10.7	3.7	10.8	6.5	10.7
OAA ₂	232.0	230.0	230.4	231.0	231.7	6.2	7.7	7.4	12.1	8.9
OAA ₃	228.5	227.1	226.1	231.6	228.8	8.6	8.7	11.0	6.6	7.0
OAA ₄	227.2	226.8	224.6	227.8	226.3	9.4	8.5	11.8	15.7	9.7
OAA ₅	223.7	223.6	220.9	225.8	219.0	11.5	10.5	11.8	10.7	10.6
OAA ₆	212.0	211.4	208.7	214.8	207.9	18.4	18.4	16.8	16.7	14.4
OAA ₇	206.4	202.6	201.0	212.1	202.9	15.3	17.9	19.4	15.1	18.8
OEI	124.4	124.9	122.1	126.6	122.8	11.6	9.9	9.0	10.4	9.3
Civilian Education	2.5	2.3	2.0	2.1	2.1	.74	.65	.75	.76	.77
Year of Birth ^a	26.1	24.5	24.3	24.2	24.7	2.2	3.0	3.0	2.7	2.7
Source of Commission	2.6	2.4	2.2	2.6	2.3	.80	.93	.93	.81	.93

^a See explanations, Table A-1.

Table A-3

MEANS AND STANDARD DEVIATIONS OF VARIABLES FOR
EACH BRANCH^a IN MATERIALS, MOVEMENTS, AND OTHERS

Variables ^a	Mean					Std. Dev.				
	AG	FI	OD	QM	TC	AG	FI	OD	QM	TC
Military Education	1.5	1.8	2.0	1.9	2.0	.77	.88	.90	.86	.87
OAA ₁	230.3	230.8	229.7	228.8	232.0	9.3	8.4	8.4	14.6	10.4
OAA ₂	226.0	227.6	228.4	230.5	230.1	16.3	9.3	11.5	7.7	10.1
OAA ₃	222.4	227.8	226.3	226.3	228.6	18.0	8.9	11.1	10.7	8.4
OAA ₄	223.0	225.3	225.5	224.1	226.4	17.7	8.4	9.8	11.6	10.5
OAA ₅	224.9	217.5	221.2	221.5	223.7	12.2	13.2	10.9	11.1	11.0
OAA ₆	212.8	208.9	209.0	209.8	209.8	14.4	18.4	15.8	16.8	20.1
OAA ₇	204.7	207.2	203.7	199.5	202.6	17.4	23.1	16.1	20.8	18.5
OEI	126.3	123.6	121.7	123.5	123.7	12.8	12.8	10.0	9.0	9.4
Civilian Education	1.6	2.1	2.0	2.1	2.0	.78	.85	.80	.80	.80
Year of Birth ^a	22.0	21.9	24.6	24.5	24.4	3.56	3.47	3.23	2.76	2.98
Source of Commission	1.9	2.3	2.4	2.4	2.3	.88	.90	.92	.87	.91

^a See explanations, Table A-1.

Table A-4
MEANS AND STANDARD DEVIATIONS OF VARIABLES
FOR BRANCH GROUPS

Variables	Mean			Std. Dev.		
	A ^b	B ^c	C ^d	A	B	C
Military Education	2.5	2.0	1.91	.66	.84	.88
OAA ₁	231.3	231.6	230.4	11.0	10.3	10.8
OEI	125.7	123.7	123.5	10.1	10.5	10.4
Civilian Education	2.1	2.3	2.0	.66	.77	.81
Year of Birth ^a	25.7	25.1	23.9	2.38	2.71	3.29
Source of Commission	2.6	2.4	2.3	.76	.88	.92

^a See explanation, footnote a, Table A-1.

^b A = Combat Arms

^c B = Combat Support

^d C = Material, Movements and Others